What is claimed is:

1. A Coriolis mass flow rate/density/viscosity sensor designed to be installed in a pipe through which a fluid flows at least temporarily, and comprising:

- a first measuring tube bent to a V shape in a first plane symmetrically with respect to a first axis of symmetry;
- a second measuring tube bent to a V shape in a second plane symmetrically with respect to a second axis of symmetry,

-- which measuring tubes are arranged parallel to each other and are each of one-piece construction, and

-- each of which measuring tubes has

--- a straight inlet portion with an inlet axis lying in the first plane and second plane, respectively,

--- a straight outlet portion with an outlet axis lying in the first plane and second plane, respectively, and aligned with the inlet axis,

--- an inlet bend connected with the inlet portion,

--- an outlet bend connected with the outlet portion,

--- a first straight tube portion connected with the inlet bend,

--- a second straight tube portion connected with the outlet bend, and

--- a vertex bend connected with the first and second straight tube portions,

---- which inlet portions are fixed in an inlet manifold, which outlet portions are fixed in an outlet manifold, and

---- which manifolds are mounted in a support frame which forms part of a housing;

- an excitation arrangement

-- which in operation causes the measuring tubes to vibrate as a tuning fork,
-- a first portion of which is fixed to the vertex bend of the first measuring tube in the area of the axis of symmetry of the first measuring tube, and
-- a second portion of which is fixed to the vertex bend of the second measuring tube in the area of the axis of symmetry of the second measuring tube;
- a first velocity or displacement sensor,
-- a first portion of which is fixed to the first straight tube portion of the first measuring tube, and
-- a second portion of which is fixed to the first straight tube portion of the second measuring tube;
- a second velocity or displacement sensor, positioned symmetrically with respect to the axes of symmetry of the measuring tubes,
-- a first portion of which is fixed to the second straight tube portion of the first measuring tube, and a second portion of which is fixed to the second straight tube portion of the second measuring tube;
- a feedthrough mounted in the support frame opposite the vertex bends and containing several electric conductors; and
- a printed-circuit board attached to the support frame and extending between the support frame and the vertex bends and having conducting tracks
-- to which leads of the excitation system and of the velocity or displacement sensors are connected.

2. The Coriolis mass flow rate/density/viscosity sensor as claimed in claim 1 wherein the measuring tubes
- are rigidly connected by a first node plate in the vicinity of a location
-- where the respective inlet portion passes into the respective inlet bend,

- are rigidly connected by a second node plate in the vicinity of a location
-- where the respective inlet bend passes into the respective first straight tube portion,
- are rigidly connected by a third node plate in the vicinity of a location
-- where the respective outlet portion passes into the respective outlet bend, and
- are rigidly connected by a fourth node plate in the vicintiy of a location
-- where the respective outlet bend passes into the respective second straight tube portion.

3. The Coriolis mass flow rate/density/viscosity sensor as claimed in claim 1 or 2 wherein electrodynamic velocity sensors are used and the excitation system is of the electrodynamic type.

4. The Coriolis mass flow rate/density/viscosity sensor as claimed in anyone of claims 1 to 3 wherein
- the support frame is of one-piece construction and is made of stainless sheet steel of constant width and thickness having a front face and a rear face, comprises:
-- a plane inlet frame portion, which has the inlet manifold welded therein,
-- a plane outlet frame portion, which has the outlet manifold welded therein,
-- a plane feedthrough frame portion connecting the inlet frame portion and outlet frame portion and having the feedthrough mounted therein in a pressure-tight manner,
-- a first plane extension frame portion extending from the inlet frame portion at an angle greater than 90°,
-- a bent vertex frame portion passing into the first extension frame portion, and

-- a second plane extension frame portion extending from the outlet frame portion at said angle and passing into the vertex frame portion; and
- the support frame is supplemented by a plane front sheet of stainless steel, which is welded to the front, and a plane rear sheet of the same steel, which is welded to the rear face, to form the housing.

5. The Coriolis mass flow rate/density/viscosity sensor as claimed in anyone of claims 1 to 4 wherein the feedthrough comprises:
- a flange attached to the support frame and having a hole;
- the printed-circuit board, which is passed through a slot formed in the feedthrough frame portion and extends into the flange, with the printed-circuit board and the slot separated by a distance sufficient for electric isolation;
- a disk of insulating material resting on the feedthrough frame portion and through which the printed-circuit board is passed; and
- an insulating compound filling a portion of the hole lying above the disk, the insulating compound having a thickness at least equal to the gap length specified for type of protection Ex-d as a function of gap width.